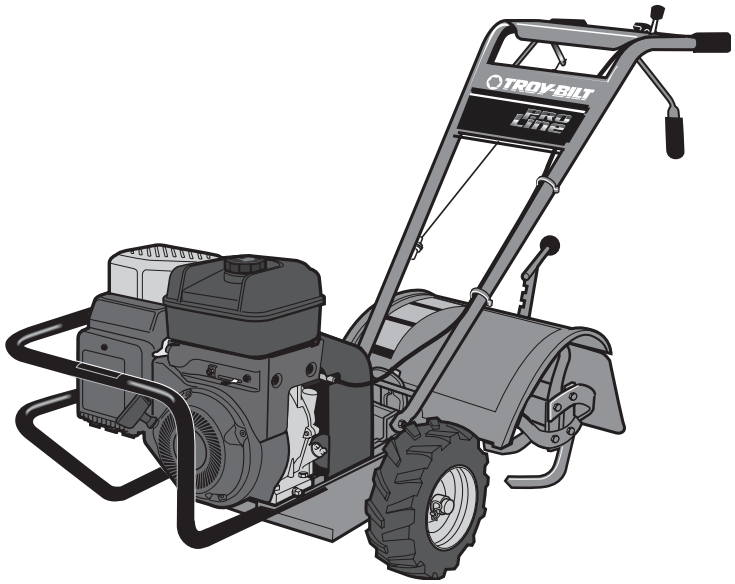
TROY-BILT®

OPERATOR'S MANUAL



Rear Tine Tiller — Pro Line

⚠ WARNING

READ AND FOLLOW ALL SAFETY RULES AND INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE THIS MACHINE.
FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.

TROY-BILT LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019

Printed In USA

Form No. 769-03523
(November 26, 2007)

To The Owner

1

Thank You

Thank you for purchasing a Garden Tiller manufactured by Troy-Bilt LLC. It was carefully engineered to provide excellent performance when properly operated and maintained.

Please read this entire manual prior to operating the equipment. It instructs you how to safely and easily set up, operate and maintain your machine. Please be sure that you, and any other persons who will operate the machine, carefully follow the recommended safety practices at all times. Failure to do so could result in personal injury or property damage.

All information in this manual is relative to the most recent product information available at the time of printing. Review this manual frequently to familiarize yourself with the machine, its features and operation. Please be aware that this Operator's Manual may cover a range of product specifications for various models. Characteristics and features discussed and/or illustrated in this manual may not be applicable to all models. Troy-Bilt LLC reserves the right to change product specifications, designs and equipment without notice and without incurring obligation.

This product has met the rigid safety standards of the Outdoor Power Equipment Institute and an independent testing laboratory. If you have any problems or questions concerning the machine, phone a authorized Troy-Bilt service dealer or contact us directly. Troy-Bilt's Customer Support telephone numbers, website address and mailing address can be found on this page. We want to ensure your complete satisfaction at all times.

Throughout this manual, all references to *right* and *left* side of the machine are observed from the operating position

The engine manufacturer is responsible for all engine-related issues with regards to performance, power-rating, specifications, warranty and service. Please refer to the engine manufacturer's Owner's/Operator's Manual, packed separately with your machine, for more information.

Table of Contents

Safe Operation Practices 3
Assembly & Set-Up 6
Controls 10
Operation 11
Maintenance & Adjustment 17
Service 22
Troubleshooting 26
Replacement Parts 27

Record Product Information

Before setting up and operating your new equipment, please locate the model plate on the equipment and record the information in the provided area to the right. You can locate the model plate by standing at the operator's position and looking down at the front, right corner of the tine shield. This information will be necessary, should you seek technical support via our web site, Customer Support Department, or with a local authorized service dealer.

MODEL NUMBER

SERIAL NUMBER

Customer Support

Please do NOT return the machine to the retailer or dealer without first contacting our Customer Support Department.

If you have difficulty assembling this product or have any questions regarding the controls, operation, or maintenance of this machine, you can seek help from the experts. Choose from the options below:

◊ Visit us on the web at www.troybilt.com

◊ Call a Customer Support Representative at (800) 828-5500 or (330) 558-7220

◊ Write us at Troy-Bilt LLC • P.O. Box 361131 • Cleveland, OH • 44136-0019

Important Safe Operation Practices

2

WARNING! This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury.
When you see this symbol. **HEED ITS WARNING!**

CALIFORNIA PROPOSITION 65

WARNING! Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.

WARNING! Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. *Wash hands after handling*

DANGER! This machine was built to be operated according to the safe operation practices in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating fingers, hands, toes and feet. Failure to observe the following safety instructions could result in serious injury or death.

Training

1. Read, understand, and follow all instructions on the machine and in the manual(s) before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
3. Never allow children under 14 years of age to operate this machine. Children 14 and over should read and understand the instructions and safe operation practices in this manual and on the machine and be trained and supervised by an adult.
4. Never allow adults to operate this machine without proper instruction.
5. Keep the area of operation clear of all persons, particularly small children and pets. Stop machine if anyone enters the area.

Preparation

1. Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, and other foreign objects which could be tripped over and cause personal injury.
2. Wear sturdy, rough-soled work shoes and close fitting slacks and shirt. Loose fitting clothes or jewelry can be caught in moving parts. Never operate this machine in bare feet or sandals.
3. Disengage clutch levers and shift (if provided) into neutral ("N") before starting the engine.
4. Never leave this machine unattended with the engine running.
5. Never attempt to make any adjustments while engine is running, except where specifically recommended in the operator's manual.

Safe Handling of Gasoline:

To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite. Wash your skin and change clothes immediately.

a. Use only an approved gasoline container.
b. Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.

c. When practical, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.

d. Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.

e. Extinguish all cigarettes, cigars, pipes and other sources of ignition.

f. Never fuel machine indoors.

g. Never remove gas cap or add fuel while the engine is hot or running. Allow engine to cool at least two minutes before refueling.

h. Never over fill fuel tank. Fill tank to no more than ½ inch below bottom of filler neck to allow space for fuel expansion.

i. Replace gasoline cap and tighten securely.

j. If gasoline is spilled, wipe it off the engine and equipment. Move unit to another area. Wait 5 minutes before starting the engine.

k. To reduce fire hazards, keep machine free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage and remove any fuel soaked debris.

l. Never store the machine or fuel container inside where there is an open flame, spark or pilot light as on a water heater, space heater, furnace, clothes dryer or other gas appliances.

Operation

1. Do not put hands or feet near rotating parts. Contact with the rotating parts can amputate hands and feet.
2. Do not operate machine while under the influence of alcohol or drugs.
3. Never operate this machine without good visibility or light. Always be sure of your footing and keep a firm hold on the handles.
4. Keep bystanders away from the machine while it is in operation. Stop the machine if anyone enters the area.
5. Be careful when tilling in hard ground. The tines may catch in the ground and propel the tiller forward. If this occurs, let go of the handle bars and do not restrain the machine.
6. Exercise extreme caution when operating on or crossing gravel surfaces. Stay alert for hidden hazards or traffic. Do not carry passengers.
7. Never operate the machine at high transport speeds on hard or slippery surfaces.
8. Exercise caution to avoid slipping or falling.
9. Look down and behind and use care when in reverse or pulling machine towards you.
10. Start the engine according to the instructions found in this manual and keep feet well away from the tines at all times.
11. After striking a foreign object, stop the engine, disconnect the spark plug wire and ground against the engine. Thoroughly inspect the machine for any damage. Repair the damage before starting and operating.
12. Disengage all clutch levers (if fitted) and stop engine before you leave the operating position (behind the handles). Wait until the tines come to a complete stop before unclogging the tines, making any adjustments, or inspections.
13. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
14. Muffler and engine become hot and can cause a burn. Do not touch.
15. Use caution when tilling near fences, buildings and underground utilities. Rotating tines can cause property damage or personal injury.
16. Do not overload machine capacity by attempting to till soil too deep at too fast of a rate.
17. If the machine should start making an unusual noise or vibration, stop the engine, disconnect the spark plug wire and ground it against the engine. Inspect thoroughly for damage. Repair any damage before starting and operating.
18. Keep all shields, guards, and safety devices in place and operating properly.
19. Never pick up or carry machine while the engine is running.
20. Use only attachments and accessories approved by the manufacturer. Failure to do so can result in personal injury.
21. If situations occur which are not covered in this manual, use care and good judgement. Contact Customer Support for assistance and the name of you nearest servicing dealer..

Maintenance & Storage

1. Keep machine, attachments and accessories in safe working order.
2. Allow a machine to cool at least five minutes before storing. Never tamper with safety devices. Check their proper operation regularly.
3. Check bolts and screws for proper tightness at frequent intervals to keep the machine in safe working condition. Also, visually inspect machine for any damage.
4. Before cleaning, repairing, or inspecting, stop the engine and make certain the tines and all moving parts have stopped. Disconnect the spark plug wire and ground it against the engine to prevent unintended starting.
5. Do not change the engine governor settings or over-speed the engine. The governor controls the maximum safe operating speed of engine.
6. Maintain or replace safety and instruction labels, as necessary.
7. Follow this manual for safe loading, unloading, transporting, and storage of this machine.
8. Always refer to the operator's manual for important details if the machine is to be stored for an extended period.

9. If the fuel tank has to be drained, do this outdoors.
10. Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.

Notice Regarding Emissions

Engines which are certified to comply with California and federal EPA emission regulations for SORE (Small Off Road Equipment) are certified to operate on regular unleaded gasoline, and may include the following emission control systems: Engine Modification (EM) and Three Way Catalyst (TWC) if so equipped.

Spark Arrestor

WARNING! This machine is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brushcovered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any).

If a spark arrester is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands.
A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 361131 Cleveland, Ohio 44136-0019.

Average Useful Life

According to the Consumer Products Safety Commission (CPSC) and the U.S. Environmental Protection Agency (EPA), this product has an *Average Useful Life* of seven (7) years, or 130 hours of operation. At the end of the *Average Useful Life*, buy a new machine or have the machine inspected annually by an authorized service dealer to ensure that all mechanical and safety systems are working properly and not worn excessively. Failure to do so can result in accidents, injuries or death.

WARNING! Your Responsibility—Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

SAVE THESE INSTRUCTIONS!

Assembly & Set-Up

3

Contents of Carton

- One Tiller
- One Hardware Pack
- One Handlebar Support
- One Operator's Manual
- One Handlebar Assembly
- One Engine Operator's Manual

WARNING! To prevent personal injury or property damage, do not start the engine until all assembly steps are complete and you have read and understand the safety and operating instructions.

Recommended Tools for Assembly

- ⅜" open-end wrench
- 9⁄16" open-end wrench
- ⅞" open-end wrench
- Scissors (to trim plastic ties)
- Ruler
- Small board (to tap plastic knob on lever)
- Tire pressure gauge
- Clean oil funnel
- Clean, high-quality motor oil. Refer to the separate Engine Operator's Manual for motor oil specifications and quantity.

Contents of Hardware pack

- ⅜-16 x 1" Hex Hd. Screw (2)
- Keyed Washer (1)
- Wheel Gear Lever Knob (1)
- Height Adjustment Flange Screw (1)
- ⅜" Flat Washer (2)
- #10 Lockwasher (2)
- ⅜"-16 Nylock Lock Nut (2)
- #10-32 x ½" Round Hd. Screw (2)
- #10-32 Nut (2)
- Cotter Pin (1)
- Cable Tie (4)

Assembly

Unpacking Instructions

1. Remove any cardboard inserts and packaging material from the carton. Remove any staples from the bottom of the carton and remove the carton.
2. Cut the large, plastic tie strap that secures the transmission tube to the shipping pallet. Leave the handlebars on top of the tiller to avoid damaging any cables.
3. The hardware pack is is inside the literature envelope. Check the contents with the list above.
4. The tiller is heavy. You should not attempt to remove it from the shipping platform until instructed to do so in these steps.

Handle

1. Cut the large, plastic cable ties that secure the handlebar ends to the handlebar mounting tabs on the transmission top cover.
2. Gently lift the handlebar (do not overstretch the attached cable) and place the handlebar cross-brace in front of the curved height adjustment bracket. See Fig. 3-1.

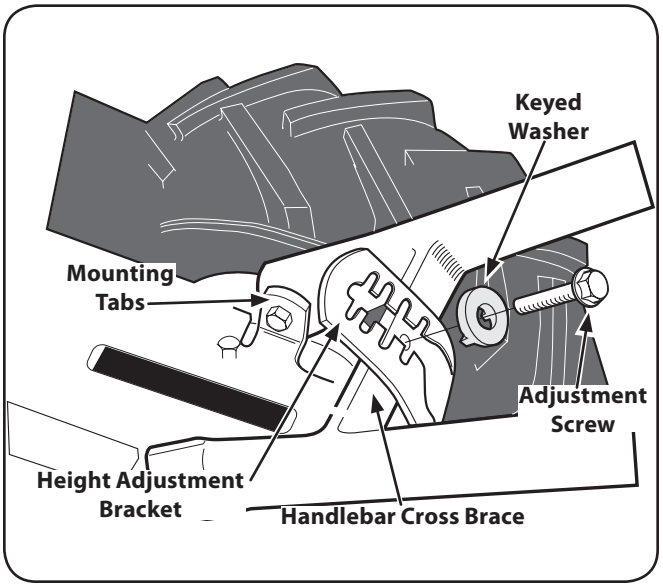


Figure 3-1

4. With the forward clutch cable on the inside of the handlebar, See Fig, 3-2, position the handlebar ends on the outside of the two mounting tabs shown in Fig. 3-1 on the transmission top cover.

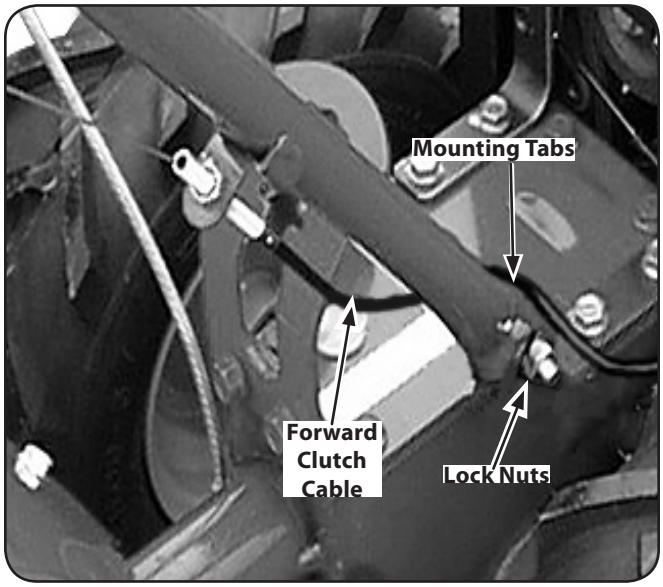


Figure 3-2

NOTE: The curved handlebar height adjustment bracket appears as shown in Fig. 3-1.

5. Loosely attach the handlebars to the mounting tabs with two ⅜-16 x 1" screws (heads of screws go to inside of tabs), ⅜" flat washers and ⅜"-16 lock nuts. See Fig. 3-2.
6. Tighten both screws securely. Make sure the handlebar cross-brace is under the bracket.
7. Move the handlebars up or down to align the threaded hole in the crossbrace with one of the four slots in the curved height adjustment bracket. Place the keyed washer on the flange head height adjustment screw with the raised edges of the washer facing down. See Fig. 3-1.
8. Thread the height adjustment screw into the hole in the handlebar cross-brace, making sure that the raised keys on the washer fit into the slot on the height adjustment bracket. Tighten the height adjustment screw securely. Next, securely tighten the two screws and nuts in the ends of the handlebar.
9. To remove the tiller from its shipping platform, first carefully unwrap the wheel gear cable with the attached lever from around the chassis. Move the Wheel Gear Lever to the DISENGAGE position, this allows the wheels to rotate freely. See Fig. 3-3. Use the handlebars to roll the tiller off the platform.

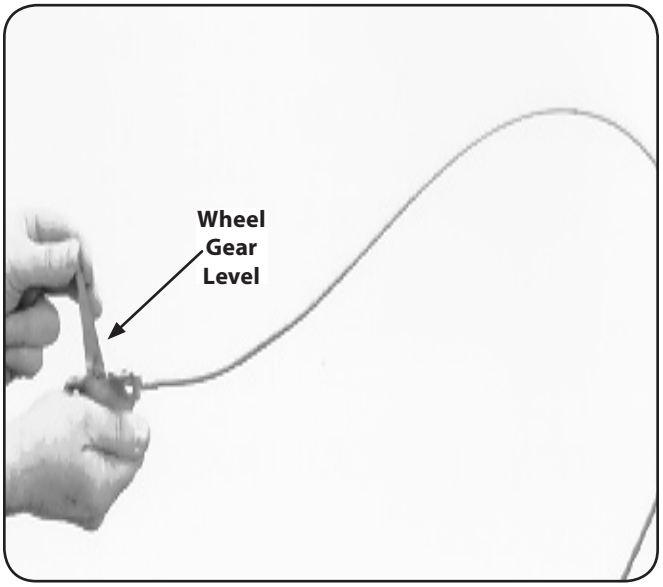


Figure 3-3

NOTE: Use the DISENGAGE position only when the engine is not running. Before starting the engine, the Wheel Gear Lever must be placed in the ENGAGE position (see Operation Section for details).

Reverse Clutch Control

1. Carefully unwrap the reverse clutch control cable from its shipping position and route it up along the inside edge of the left side handlebar. See Fig. 3-4. A knob and large hex nut is installed on the cable.

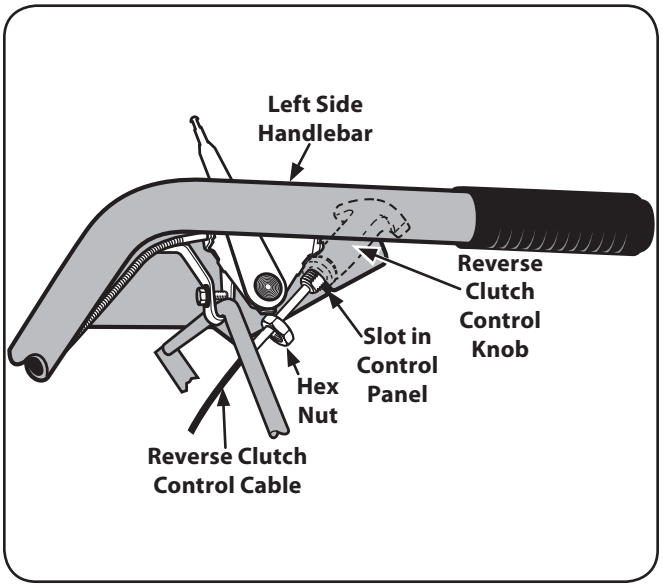


Figure 3-4

2. Insert the cable into the slot on the control panel and fit the threaded assembly into the hole in the slot. Be sure that the flat side of the threaded assembly is aligned with the flat side of the hole. Slide the hex nut up the cable and tighten it securely.
3. Test the function of the reverse clutch control cable by pulling the knob out and releasing it. The knob should return to its neutral position against the tapered bushing. If it does not, contact your local dealer or the factory for technical assistance.

Forward Clutch Cable

1. Remove any fasteners (rubber bands, tape, etc.) that may secure the Forward Clutch Control levers to the handlebar. See Fig. 3-5.

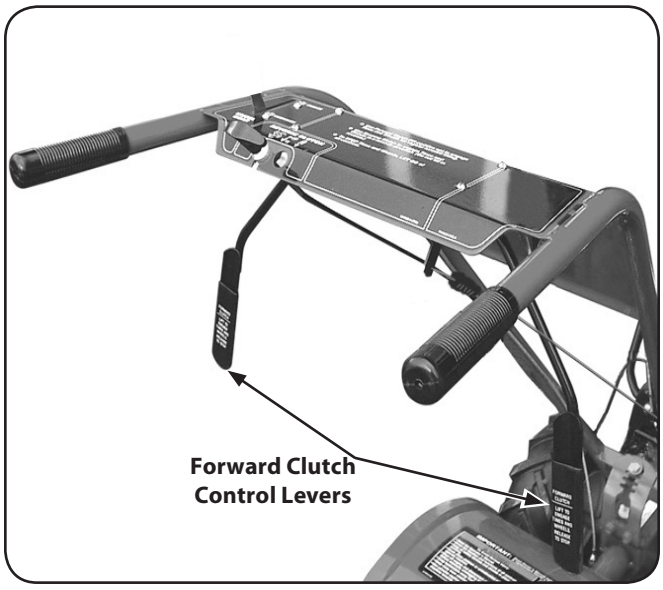


Figure 3-5

2. The forward clutch control cable (with attached spring) is hanging loosely near the right-side wheel. Being careful not to kink or stretch the cable, insert the Z-connector into the hole at the end of the forward clutch control linkage. See Fig. 3-6.

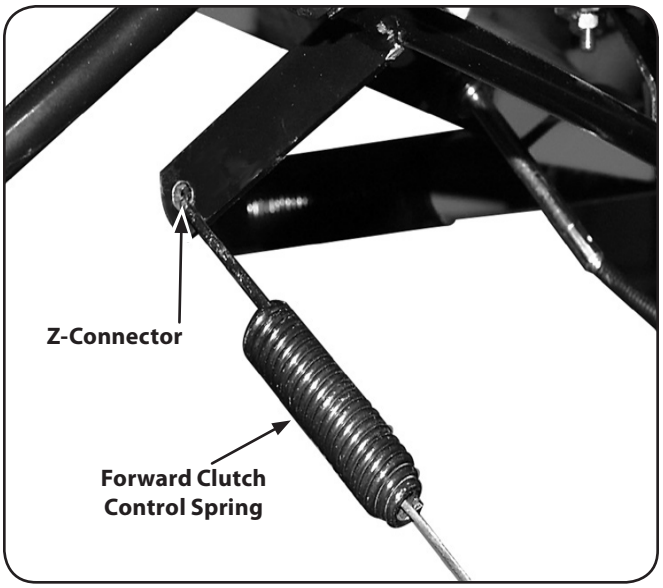


Figure 3-6

3. Attach the cable adjuster to the bracket on the right-side handlebar. See Fig. 3-7. Use two ½" wrenches to loosen the two jam nuts just enough to slide the cable adjuster onto the bracket. Then hand tighten the jam nuts.

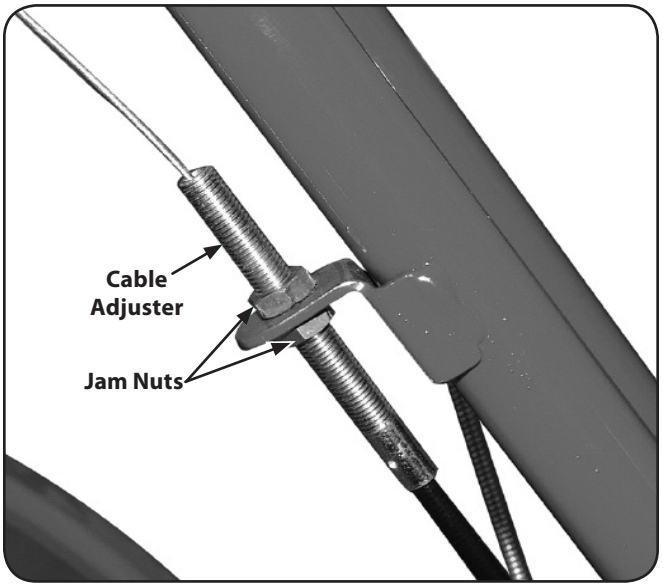


Figure 3-7

WARNING! Incorrect cable adjustment could cause the wheels and tines to rotate unexpectedly. Follow adjustment procedures carefully. Failure to do so could result in personal injury or property damage.

4. Check for the correct spring/cable tension as instructed in the Maintenance & Adjustments Section.
5. When the tension is correct, tighten the two jam nuts securely.

Wheel Gear Lever

1. Insert the Wheel Gear Lever up through the slot in the control panel that is labeled "WHEEL GEAR." See Fig. 3-8.

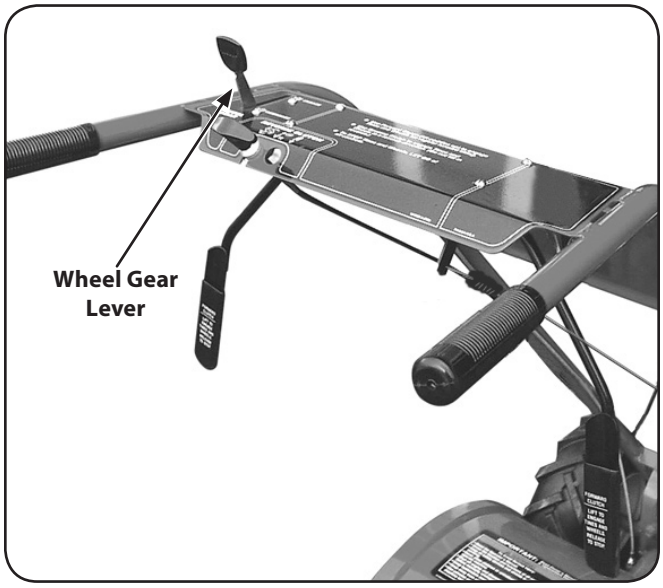


Figure 3-8

2. Insert two #10-32 x ½" round head screws down through the "+" marks on the control panel decal and securely attach the wheel gear mounting bracket using two #10 lockwashers and #10-32 nuts.
3. Use a small board to tap the Wheel Gear Lever knob securely onto the lever.
4. Secure the wheel gear cable and the reverse clutch control cable to the leftside handlebar with two plastic ties located about two feet apart. Snip off any excess with scissors. See Fig. 3-9.

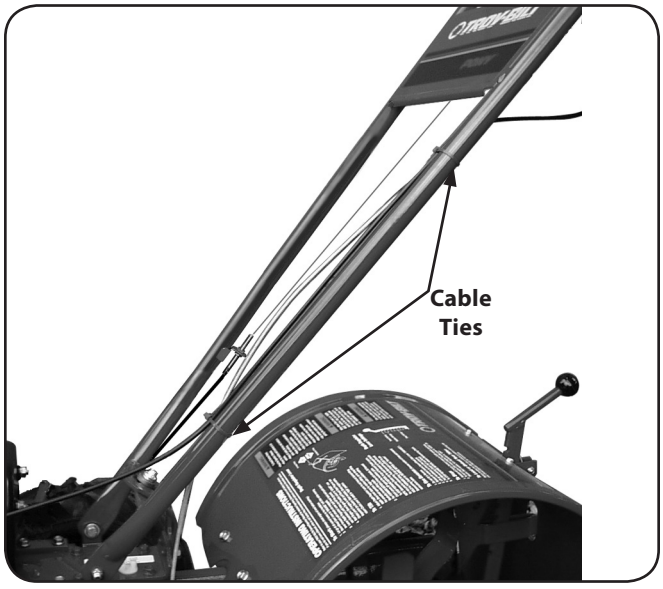


Figure 3-9

Set-Up

Tires

Use a tire pressure gauge to check the air pressure in both tires. Deflate or inflate both tires equally to between 15 PSI and 20 PSI. Be sure that both tires are inflated equally or the tiller will pull to one side.

Gas & Oil Fill-Up

Service the engine with gasoline and oil as instructed in the Engine Operator's Manual packed seperately with your tiller. Read the instructions carefully.

WARNING! Use extreme care when handling gasoline. Gasoline is extrememly flammable and the vapors are explosive. Never fuel the machine indoors or while the engine is hot or running. Extinguish cigarettes, cigars, pipes and any other sources of ignition.

Transmission Gear Oil

The transmission was filled with gear oil at the factory. However, be sure to check the oil level at this time to make certain it is correct. See the Maintenance & Adjustments Section for instructions on checking and adding transmission gear oil.

Controls and Features

4

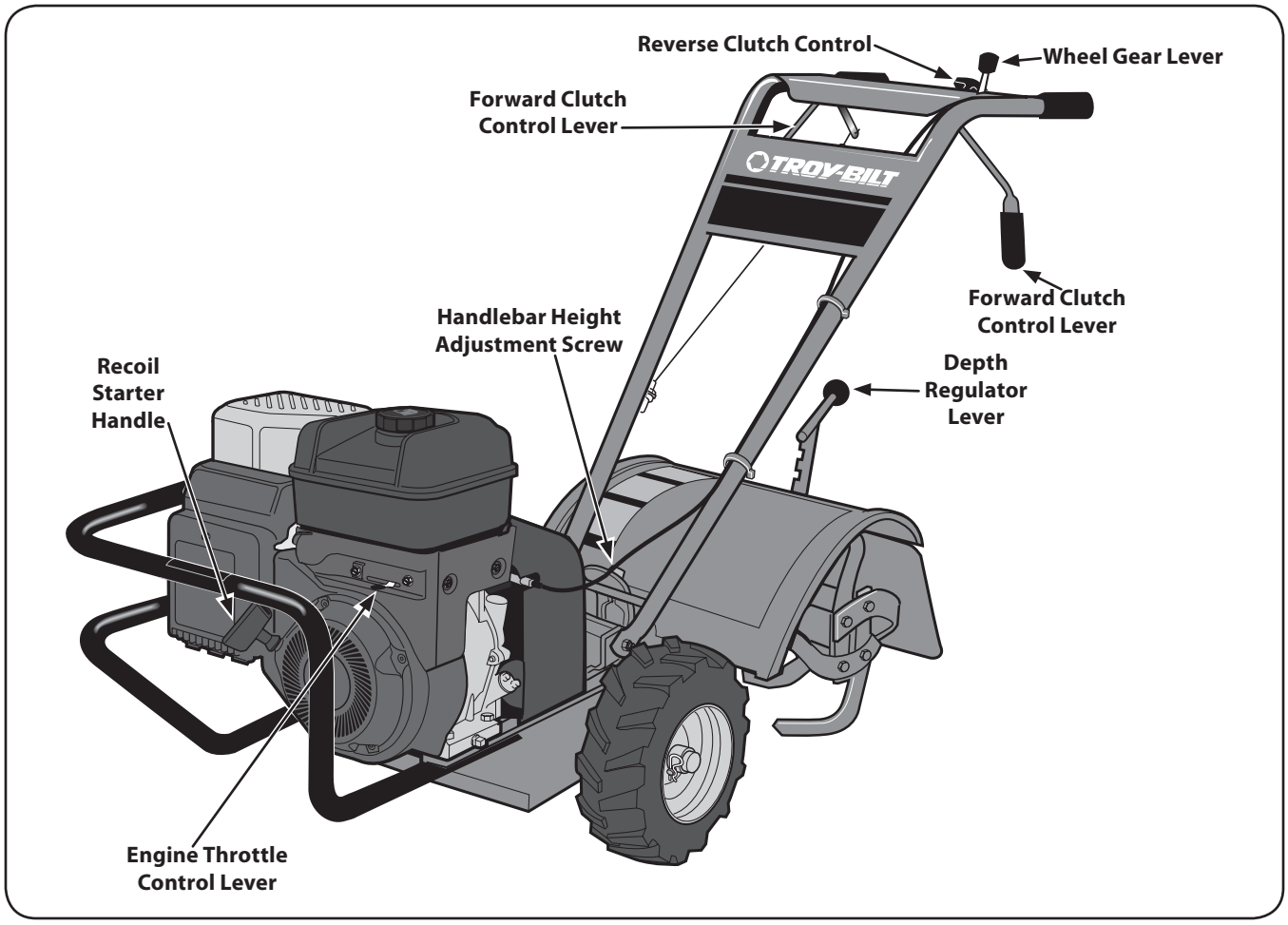


Figure 4-1

NOTE: For detailed information on all engine controls, refer to the seperate Engine Operator's Manual.

Forward Clutch Control

The two interconnected levers control the engagement of forward drive to the wheels and tines.

Wheel Gear Lever

This lever has two positions: ENGAGE and DISENGAGE.

Reverse Clutch Control

The Reverse Clutch Control controls the engagement of reverse drive to the wheels and tines.

Gas Cap

Unthread the gas cap to add gasoline to the fuel tank.

Recoil Starter

The recoil starter is used to pull start the engine.

Depth Regulator

The Depth Regulator lever controls the tilling depth of the tines. Pull the lever straight back and slide it up or down to engage the notched height settings.

Engine Throttle Control

The Engine Throttle Control Lever is used to regulate the engine speed. On the recoil start model only, it is also used to stop the engine (on the electric start model, the electric start keyswitch is used to stop the engine).

Handlebar Height Adjustment Screw

Handlebar Height is adjustable to four different settings. When setting the height keep in my mind that the handlebars will be lower when the tines are engaged in the soil.

Operation

5

Starting the Engine

Pre-Start Checklist

With the spark wire disconnected from the spark plug, make the following checks and perform the following services before starting the engine.

1. Read the Safe Operation Practices and Features & Controls Sections in this manual. Read the separate Engine Operator's Manual.
2. Check the machine for loose or missing hardware. Service as required.
3. Check the engine oil level. See the Engine Operator's Manual for instructions.
4. Check that all safety guards and covers are in place.
5. Check the air cleaner and the engine cooling system. See the Engine Operator's Manual for instructions.
6. Attach the spark plug wire to the spark plug.
7. Fill the fuel tank with gasoline according to the directions in the separate Engine Operator's Manual. Follow all the instructions and safety rules carefully.

WARNING! Never run the engine indoors or in enclosed, poorly ventilated areas. Engine exhaust contains carbon monoxide, an odorless and deadly gas. Avoid the engine muffler and nearby areas. Temperatures in these areas may exceed 150° F.

Starting the Engine

1. Complete the "Pre-Start Checklist."
2. Put the Wheel Gear Lever in the ENGAGE position.
3. Put the Depth Regulator Lever in the "travel" position (lever all the way down) so that the tines are clear of the ground.
4. Release all the controls on the tiller.
5. Put the Engine Throttle Control Lever in the "FAST" setting.
6. On engines equipped with a fuel valve, turn the valve to the open position as instructed in the separate Engine Operator's Manual.
7. Choke or prime engine as instructed in the separate Engine Operator's Manual.
8. Place one hand on the fuel tank to stabilize the tiller when you pull the starter handle.
9. Use the recoil starter rope to start the engine as instructed in the separate Engine Operator's Manual. When the engine starts, gradually move the choke lever to the "NO CHOKE", "CHOKE OFF" or "RUN" position.
10. Leave the Engine Throttle Control Lever in the "FAST" setting.

Stopping the Engine

1. To stop the wheels and tines, release the Forward Clutch Control levers or the Reverse Clutch Control knob (whichever control is engaged).
2. To stop the engine move the Engine Throttle Control Lever to the "STOP" position.

Engaging the Drive & Tines

1. For forward motion of the wheels and tines:
    a. Pull one or both of the Forward Clutch Control Levers up and hold them against the handlebars. To stop the forward motion of the wheels and tines, release the levers.
    b. As the tiller moves forward, relax and let the wheels pull the machine along while the tines dig. Walk behind and a little to one side of the tiller. Use a light but secure grip with one hand on the handlebars, but keep your arm loose. See Fig. 5-1.

Figure 5-1

    c. Let the tiller move ahead at its own pace and do not push down on the handlebars to try and force the tiller to dig deeper — this takes weight off the wheels, reduces traction, and causes the tines to try and propel the tiller.

WARNING! Do not push down on the handlebars to try to make the tiller till deeper. This prevents the wheels from holding the tiller back and can allow the tines to rapidly propel the tiller forward, which could result in loss of control, property damage or personal injury.

5. For reverse motion of the wheels and tines:
    a. Look behind and exercise caution when operating in reverse. Do not till while in reverse.
    b. Stop all forward motion before reversing. Lift the handlebars with one hand until the tines are off the ground and then pull the Reverse Clutch Control knob out to engage the reverse motion. See Fig. 5-2.

Figure 5-2

    c. To stop reverse motion, let go of the Reverse Clutch Control knob.

Turning the Tiller

    a. Practice turning the tiller in a level and open area. Be very careful to keep your feet and legs away from the tines.
    b. To make a turn, reduce the engine speed and then lift the handlebars until the engine and tines are balanced over the wheels. See Fig.5-3.

Figure 5-3

c. With the tiller balanced, push sideways on the handlebar to move the tiller in the direction of the turn. See Fig. 5-4. After completing the turn, slowly lower the tines into the soil and increase the engine speed.

Figure 5-4

Clearing the Tines

- The tines have a self-clearing action which eliminates most tangling of debris in the tines. However, occasionally dry grass, stringy stalks or tough vines may become tangled. Follow these procedures to help avoid tangling and to clean the tines, if necessary.
- To reduce tangling, set the depth regulator deep enough to get maximum "chopping" action as the tines chop the material against the ground. Also, try to till under crop residues or cover crops while they are green, moist and tender.
- While power composting, try swaying the handlebars from side to side (about 6" to 12"). This "fishtailing" action often clears the tines of debris.
- If tangling occurs, lift the tines out of the soil and run the tiller in reverse for a few feet. This reversing action should unwind a good deal of debris.
- If reversing the tiller doesn't clear the debris, it may be necessary to remove the debris by hand (a pocket knife will help you to cut away the material).

WARNING! Before clearing the tines by hand, stop the engine, allow all moving parts to stop and disconnect the spark plug wire. Failure to follow this warning could result in personal injury.

Tilling Tips & Techniques

WARNING! Before tilling, contact your telephone or utilities company and inquire if underground equipment or lines are used in your area. Do not till near buried electric cables, telephone lines, pipes or hoses.

Let the Tiller Do the Work

- While tilling, relax and let the wheels pull the tiller along while the tines do the digging. Walk on the side that is not yet finished (to avoid making footprints in the freshly tilled soil) and lightly, but securely grip the handlebar with just one hand.
- Avoid pushing down on the handlebars in an attempt to force the tiller to dig deeper. Doing so takes the weight off the powered wheels, causing them to lose traction. Without the wheels helping to hold the tiller back, the tines will attempt to propel the tiller — often causing the tiller to skip rapidly across the ground. (Sometimes, slight downward pressure on the handlebars will help get through a particularly tough section of sod or unbroken ground, but in most cases this won't be necessary at all.)

Tilling Depths

- Avoid trying to dig too deeply too quickly, especially when busting sod or when tilling soil that hasn't been tilled for some time. Use shallow depth regulator settings (only an inch or two deep) for the first passes through the garden area. With each succeeding pass, adjust the depth regulator to dig an inch or two deeper. (Watering the garden area a few days prior to tilling will make tilling easier, as will letting the newly worked soil set for a day or two before making a final, deep tilling pass.)
- When cultivating, use very shallow depth settings to prevent injury to plants whose roots often grow close to the surface. If needed, lift up on the handlebars slightly to prevent the tines from digging too deeply. (Cultivating on a regular basis not only eliminates weeds, it also loosens and aerates the soil for better moisture absorption and faster plant growth.)

Avoid Tilling Soggy, Wet Soil

- Tilling wet soil often results in large, hard clumps of soil that can interfere with planting. If time permits, wait a day or two after heavy rains to allow the soil to dry before tilling. Test soil by squeezing it into a ball. If it compresses too easily, it is too wet to till.

Avoid Making Footprints

- When possible, walk on the untilled side of the machine to avoid making footprints in the freshly tilled soil. Footprints cause soil compaction that can hamper root penetration and contribute to soil erosion. They can also "plant" unwanted weed seeds back into the freshly tilled ground.

Choosing Correct Wheel and Tine Speeds

- With experience, you will find the tilling depth and tilling speed combination that is best for your garden. Set the Engine Throttle Control Lever to a speed to give the engine adequate power and yet allow it to operate at the slowest possible speed until you have achieved the maximum tilling depth you desire. Faster engine speeds may be desirable when making final passes through the seedbed or when cultivating. Selection of the correct engine speed, in relation to the tilling depth, will ensure a sufficient power level to do the job without causing the engine to labor.

Suggested tilling patterns

- When preparing a seedbed, go over the same path twice in the first row, then overlap one-half the tiller width on the rest of the passes. See Fig. 5-5.

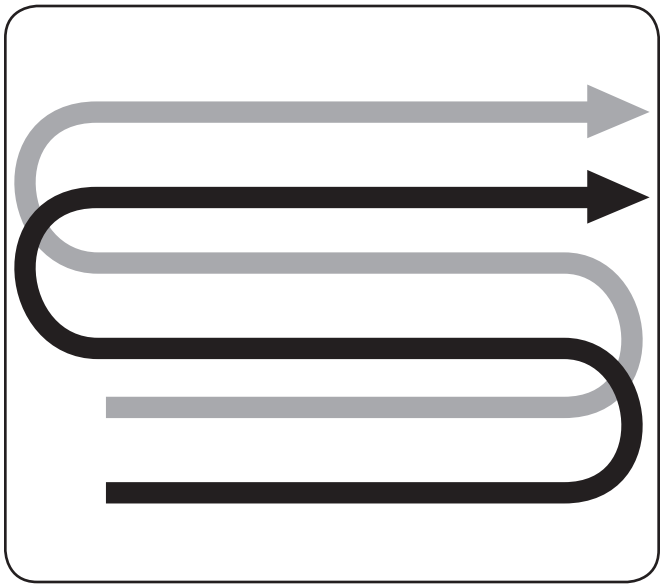


Figure 5-5

- When finished in one direction, make a second pass at a right angle as shown in Fig. 5-6. Overlap each pass for the best results (in very hard ground it may take three or four passes to thoroughly pulverize the soil).

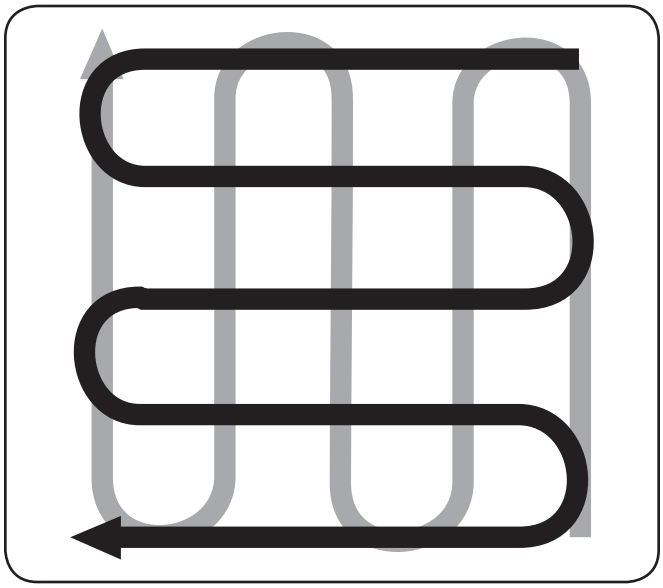


Figure 5-6

- If the garden size will not permit lengthwise and then crosswise tilling, overlap the first passes by one-half a tiller width, followed by successive passes at one-quarter width See Fig. 5-7.

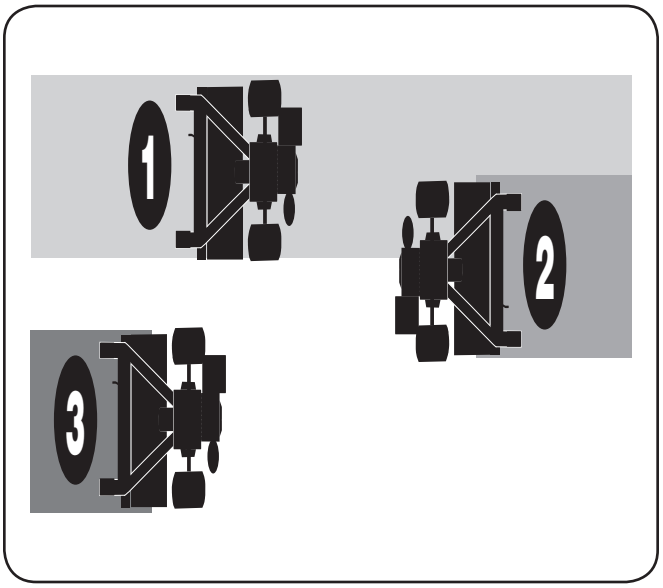


Figure 5-7

- With planning, you can allow enough room between rows to cultivate. See Fig. 5-8. Leave room for the hood width, plus enough extra room for future plant growth.

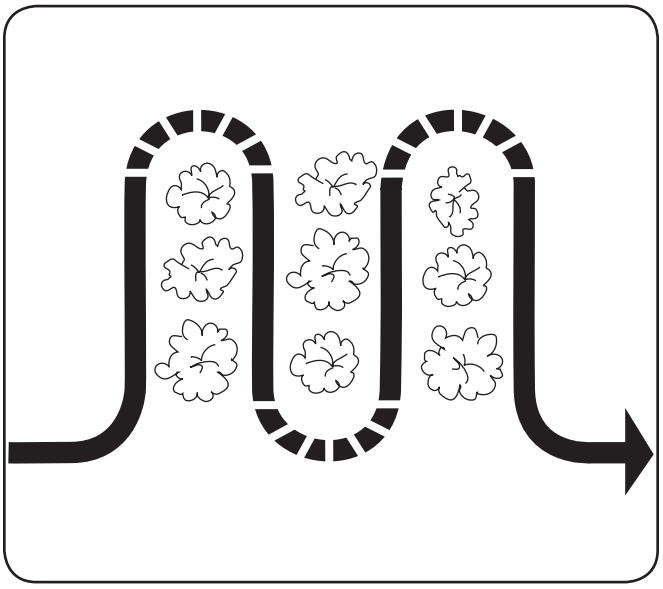


Figure 5-8

Tilling on slopes

If you must garden on a moderate slope, please follow two very important guidelines:

1. Till only on moderate slopes, never on steep ground where footing is difficult. Review the safety rules in the Safe Operation Practices Section.
2. Tilling up and down slopes is recommended over terracing. Tilling vertically on a slope allows maximum planting area and also leaves room for cultivating.

   NOTE: When tilling on slopes, be sure the correct oil level is maintained in the engine (check every one-half hour of operation). The incline of the slope will cause the oil to slant away from its normal level and this can starve engine parts of the required lubrication. Keep the engine oil level at the full point at all times.

Tilling up and down slopes:

- To keep soil erosion to a minimum, be sure to add enough organic matter to the soil so that it has good moistureholding texture and try to avoid leaving footprints or wheel marks.
- When tilling vertically, try to make the first pass uphill as the tiller digs more deeply going uphill than it does downhill. In soft soil or weeds, you may have to lift the handlebars slightly while going uphill. When going downhill, overlap the first pass by about one-half the width of the tiller.

Terrace Gardening:

- When a slope is too steep or too short for vertical tilling, it may be necessary to till across the slope and create terraced rows. Terraces are rows that are cut into the side of a slope, creating a narrow, but flat area on which to plant.
- On a long slope, you can make several terraces, one below the other.
- Terraces should be only 2-to-3 feet wide. Digging too far into the side of the slope will expose poor subsoil that is unproductive for plants.
- To create a terrace, start at the top of the slope and work down. Go back and forth across the first row as shown in Fig. 5-9.

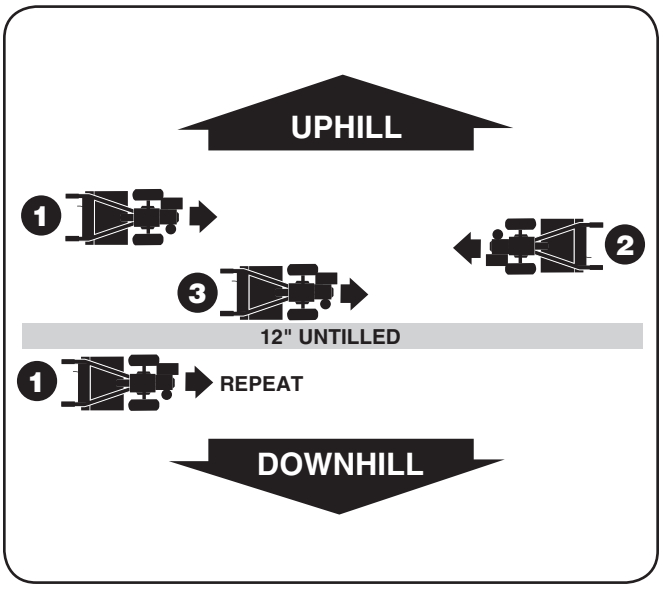


Figure 5-9

- Each succeeding lower terrace is started by walking below the terrace you're preparing. For added stability of the tiller, always keep the uphill wheel in the soft, newly tilled soil. Do not till the last 12" or more of the downhill outside edge of each terrace. This untilled strip helps prevents the terraces from breaking apart and washing downhill. It also provides a walking path between rows.

Tilling across slopes without using terraces:

- If vertical or terracing gardening aren't practical for you, then you can till laterally across a slope. This method is not recommended as it can create unsure footing and invites soil erosion.
- As in terrace gardening, start at the top of the slope and overlap the first pass by half the width of the tiller. For the added stability of the tiller, always keep the uphill wheel in the soft, newly tilled soil.

Power Composting

- Power composting simply means tilling under and burying in the soil all manner of organic matter such as crop residues, leaves, grass clippings and cover crops. This material will decompose during the non-growing season and add important natural nutrients to the soil.

WARNING! When power composting, do not keep the Depth Regulator Lever at a deep setting if the tiller jumps or bucks. If jumping or bucking occurs, move the Depth Regulator Lever down to one of the shallower settings and then slowly increase the tilling depth on later passes. Failure to follow this warning could result in personal injury.

- The first place to begin is with crop residues such as leftover vines, stalks, stems and roots. Power compost these crop residues as soon as they finish bearing. The sooner this is done, the better, as tender green matter is easier to till under. Use the deepest depth regulator setting possible without causing the engine to labor or the tiller to jump ahead.
- Standing cornstalks of reasonable height can be power composted. Pushing over (but not uprooting) cornstalks will often make it easier for your tiller to chop up the stalks. Keep the tines clear of excessive tangling by "fishtailing" or frequently using reverse. Make several passes, then return a few days later to finish off any remaining stubble.
- After tilling under crop residues, add more organic matter such as leaves, grass clippings and even kitchen scraps. When tilled into the soil, this organic matter will decompose and add even more important nutrients to the soil.
- After power composting, you may want to plant a "green manure" cover crop to protect the soil during the off-season. You simply grow a crop of clover, alfalfa, buckwheat, peas, beans, rye grass, grain, or kale and then till it into the soil prior to the planting season.

Loading & Unloading the Tiller

WARNING! Loading and unloading the tiller into a vehicle is potentially hazardous and is not recommended unless absolutely necessary, as this could result in personal injury or property damage. However, if you must load or unload the tiller, follow the guidelines given next.

- Before loading or unloading, stop the engine, wait for all the parts to stop moving, disconnect the spark plug wire and let the engine and muffler cool. Remove the ignition key on electric start models.
- The tiller is too heavy (over 170 lbs.) and bulky to be safely lifted by one person. Two or more people should share the load.
- Use sturdy ramps and manually — with the engine shut off — roll the tiller into and out of the vehicle. Two or more people are needed to do this.
- Ramps must be strong enough to support the combined weight of the tiller and any handlers. The ramps should provide good traction to prevent slipping; they should have side rails to guide the tiller along the ramps and they should have a locking device to secure them to the vehicle.
- The handlers should wear sturdy footwear that will help to prevent slipping.
- Position the loading vehicle so that the ramp angle is as flat as possible (the less incline to the ramp, the better). Turn the vehicle's engine off and apply the parking brake.
- When going up the ramps, stand in the normal operating position and push the tiller ahead of you. Have a person at each side to turn the wheels.
- When going down the ramps, walk backward with the tiller following you. Keep alert for any obstacles behind you. Position a person at each wheel to control the speed of the tiller. Never go down ramps tiller-first, as the tiller could tip forward.
- Use wooden blocks to place on the downhill side of the wheels if you need to stop the tiller from rolling down the ramp. Also, use the blocks to temporarily keep the tiller in place on the ramps (if necessary), and to chock the wheels in place after the tiller is in the vehicle.
- When the tiller is in the vehicle, prevent it from rolling by engaging the wheels in the wheel drive position (put Wheel Gear Lever in ENGAGE). Chock the wheels with blocks and securely tie the tiller down.

Maintenance & Adjustments

6

Maintenance Schedule

	After 2-hour break-in	Before Each Use	Every 5 Hours	Every 10 Hours	Every 30 Hours	See Engine Manual
Check Motor Oil Level		✓	✓			
Clean Engine		✓				✓
Check Drive Belt Tension	✓			✓		
Check Nuts and Bolts	✓			✓		
Change Motor Oil	✓			✓		
Lubricate Tiller				✓		
Service Air Filter						✓
Check Transmission Gear Oil	✓				✓	
Check Tines for Wear					✓	
Check Air Pressure in Tires					✓	
Service Spark Plug						✓

WARNING! Before inspecting, cleaning or servicing the machine, shut off the engine, wait for all moving parts to come to a complete stop, disconnect the spark plug wire and move the wire away from the spark plug. Remove the ignition key on electric start models. Failure to follow these instructions can result in serious personal injury or property damage.

Maintenance

Engine

Refer to the Engine Operator's manual packaged with you machine for all engine maintenance.

Check the Tire Pressure

Check the air pressure in both tires. Deflate or inflate both tires evenly to 15-to-20 PSI (pounds per square inch).

Be sure that both tires have the same air pressure or the tiller will tend to pull to one side.

Hardware

At least every 10 operating hours, check the tiller for loose or missing hardware (screws, bolts, nuts, hairpin cotters, etc.). Loose or missing hardware can lead to equipment failure, poor performance or oil leaks.

Be sure to check the three end cap mounting screws located at the rear of the transmission. Lift the tine flap to service those screws.

Air Filter

The engine air cleaner filters dirt and dust out of the air before it enters the carburetor. Operating the engine with a dirty, clogged air filter can cause poor performance and damage to the engine. Never operate the engine without the air cleaner installed. Inspect and service the air cleaner more often if operating in very dusty or dirty conditions. Service the air cleaner as instructed in the separate Engine Operator's Manual.

Transmission Gear Oil

Check the transmission gear oil after every 30 hours of operation or whenever you notice any oil leak. Operating the tiller when the transmission is low on oil can result in severe damage.

To Check the Transmission Gear Oil Level:

1. Check the gear oil level when the transmission is cool. Gear oil will expand in warm operating temperatures and this expansion will provide an incorrect oil level reading.
2. With the tiller on level ground, pull the Depth Regulator Lever back and then slide it to the second notch from the top.
3. Remove the oil level check plug on the left-side of the transmission. (Due to dried paint on the plug threads, it may require some force to remove the plug the first time.) See Fig. 6-1. The gear oil level is correct if oil starts to flow out of the hole as the plug is removed. If so, securely reinstall the plug.

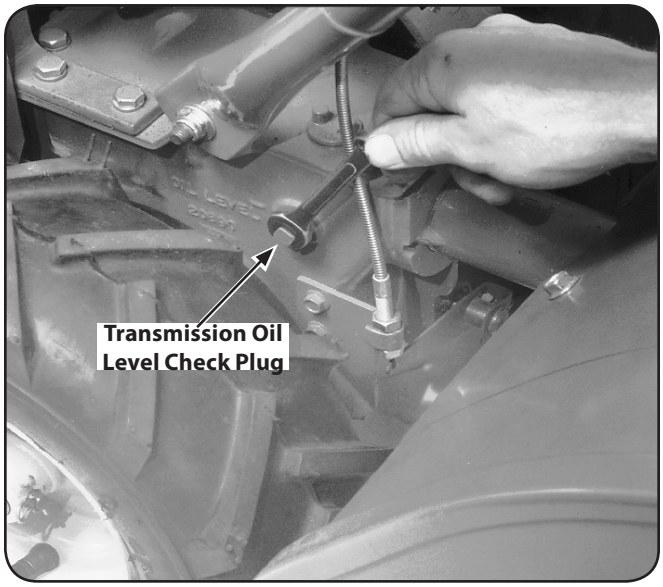


Figure 6-1

4. If oil does not flow from the check hole, add oil as follows:

   NOTE: Do not use automatic transmission fluid or motor oil in the transmission.

   a. Clean the area around the fill hole and unscrew the gear oil fill plug.
   b. If adding only a few ounces of gear oil, use API rated GL-4 or GL-5 gear oil having a viscosity of SAE 140, SAE 85W-140 or SAE 80W-90. If refilling an empty transmission, use only GL-4 gear oil having a viscosity of SAE 85W-140 or SAE 140.
   c. Using a clean funnel, slowly add gear oil until it flows from the gear oil level check hole.
   d. Reinstall and tighten securely the gear oil fill plug.

Lubrication

Proper lubrication of the tiller is an essential part of your maintenance program. After every 10 operating hours, oil or grease the lubrication points shown in Fig. 6-2 as described below. Use a good quality lubricating oil (#30 weight engine oil is suitable) and a good quality general purpose grease (grease that has a metal lubricant is preferred, if available).

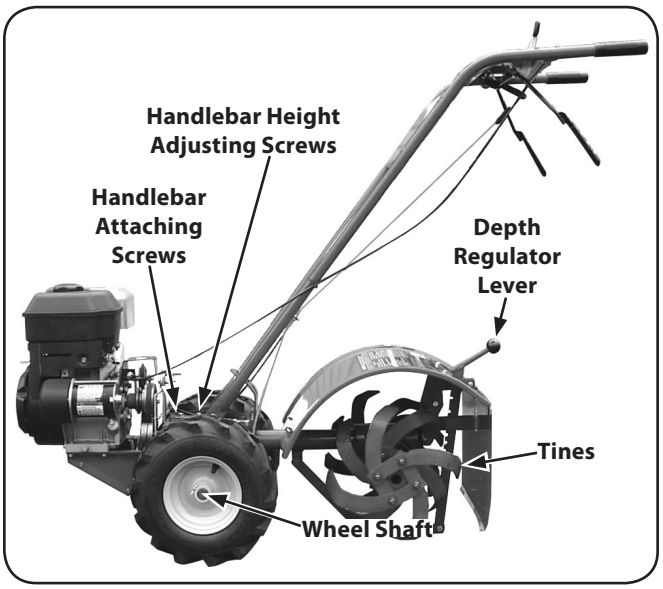


Figure 6-2

- Remove the wheels, clean the wheel shaft and apply a thin coating of grease to the shaft.
- Grease the back, front and sides of the depth regulator lever.
- Remove the tines, clean the tine shafts and inspect for rust, rough spots or burrs (especially around holes). File or sand smooth and coat the ends of the shaft with grease.
- Oil the threads on the handlebar height adjustment screw.
- Oil the threads on the handlebar attaching screws.

Adjustments

Wheel Gear Cable

When the Wheel Gear Lever is in DISENGAGE, the wheels will roll freely (freewheel). The wheels should not roll freely when the lever is in ENGAGE. If the wheels roll freely when the Wheel Gear Lever is in ENGAGE, the wheel gear cable needs to be adjusted as described below.

1. With the engine shut off and the spark plug wire disconnected, put the Wheel Gear Lever in ENGAGE.
2. Loosen the top adjustment nut on the wheel gear cable bracket that is located on the left side rear of the transmission. See Fig. 6-3.

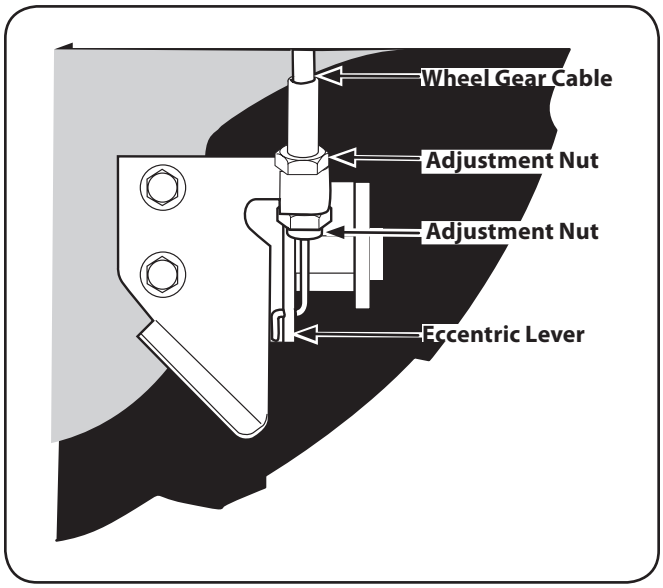


Figure 6-3

3. Push the wheel gear cable down and roll the tiller slightly forward or backward until the eccentric lever engages (locks) the wheels. Hold the cable in that position and tighten the top and bottom adjustment nuts.
4. Move the Wheel Gear Lever to ENGAGE and DISENGAGE several times to check the adjustment. The wheels should not roll when the lever is in ENGAGE, but they should roll when the lever is in DISENGAGE. Readjust the cable as required.

Forward Clutch Belt

Maintaining the correct belt tension is important to good tilling performance and long belt life. A loose belt will slip on the engine and transmission pulleys and cause the tines and wheels to slow down — or stop — even though the engine is running at full speed. A loose belt will also result in premature belt wear.

While checking the belt tension, also check for cracks, cuts or frayed edges. A belt in poor condition should be replaced as soon as possible.

Tension on a new forward clutch belt should be checked after the first two (2) hours of operation and after every ten (10) hours of operation after that. See Fig. 6-4.

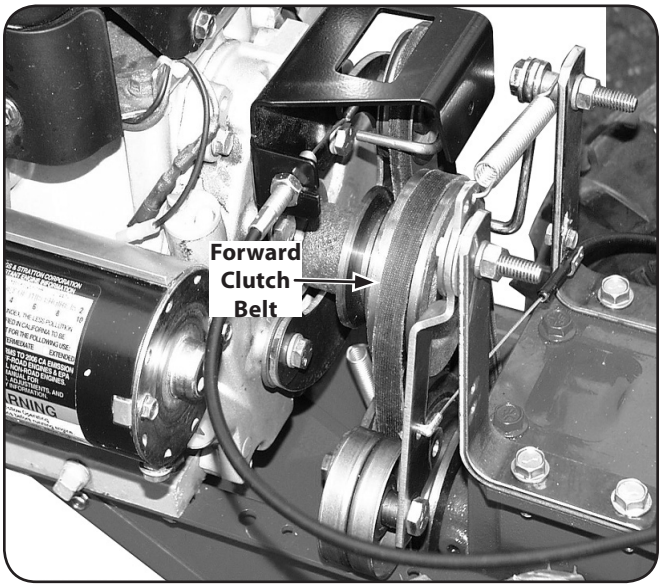


Figure 6-4

1. Before checking, shut off the engine, allow the engine and muffler to cool down, disconnect the spark plug wire remove the ignition key on electric start models.
2. The coiled part of the forward clutch spring measures 2" in length when the Forward Clutch Control levers are not pulled up. Pull either the Forward Clutch Control Lever up against the handlebar and measure the length of the coil on the forward clutch spring. Tension is correct if the length of the extended coil is 2-½". The forward clutch control cable needs adjustment if the extended length of the coil is not 2-½". See Fig. 6-5.

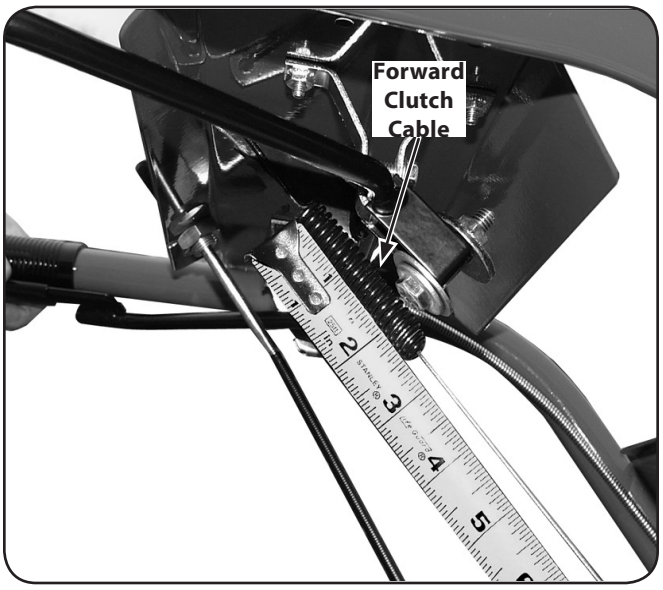


Figure 6-5

Follow these steps if the forward clutch control needs adjustment.

1. Before adjusting the belt, shut off engine, allow the engine and muffler to cool down, disconnect the spark plug wire, and remove the ignition key on electric start models.
2. Belt adjustments are done with the forward clutch cable adjuster. Use two ½", open-end wrenches to loosen the two jam nuts a few turns. See Fig. 6-6

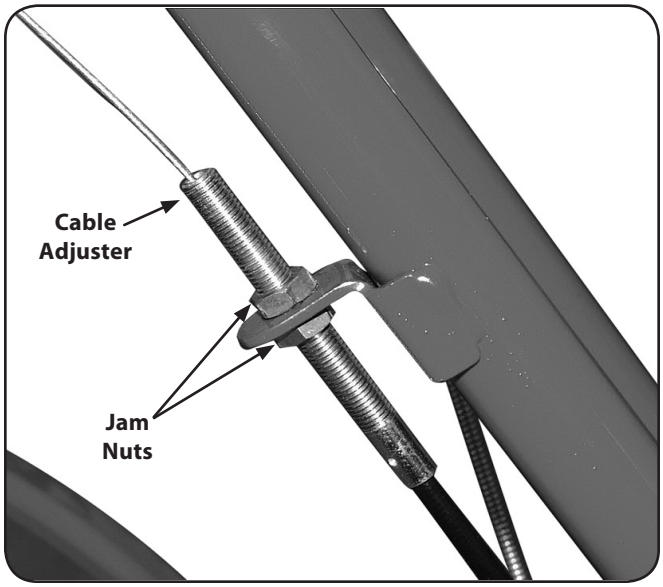


Figure 6-6

3. Move the cable adjuster downward for more belt tension.
4. Hand tighten the jam nuts and pull the Forward Clutch Control levers up against the handlebar. Measure the spring coil. The extended length of the coil should be 2-½". Repeat this procedure until the extended spring length is correct.
5. Tighten both jam nuts securely.

Reverse Clutch Belt

The reverse clutch belt, because it is used more sparingly, may not require tension adjustment until a significant number of operating hours has passed. See Fig. 6-7. A tension adjustment is required only if there is little or no reverse movement when the Reverse Clutch Control knob is pulled out.

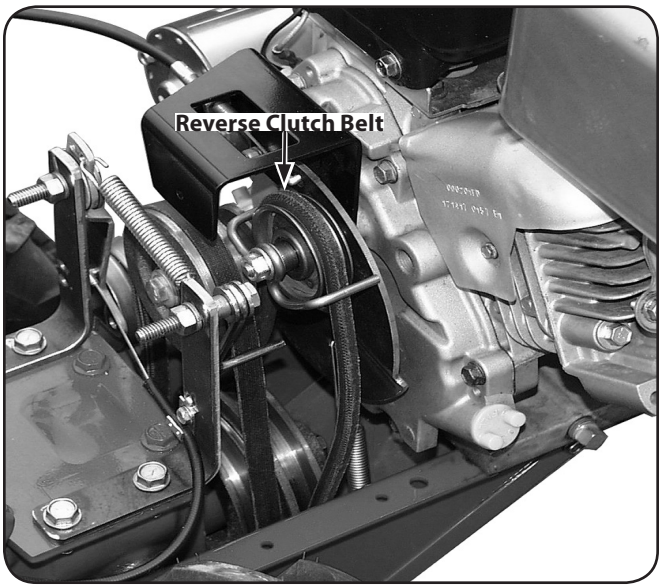


Figure 6-7

1. Before adjusting the belt, shut off the engine, allow the engine and muffler to cool down, disconnect the spark plug wire and remove the ignition key on electric start models.
2. Remove the two lock nuts and remove the belt cover. See Fig. 6-8.

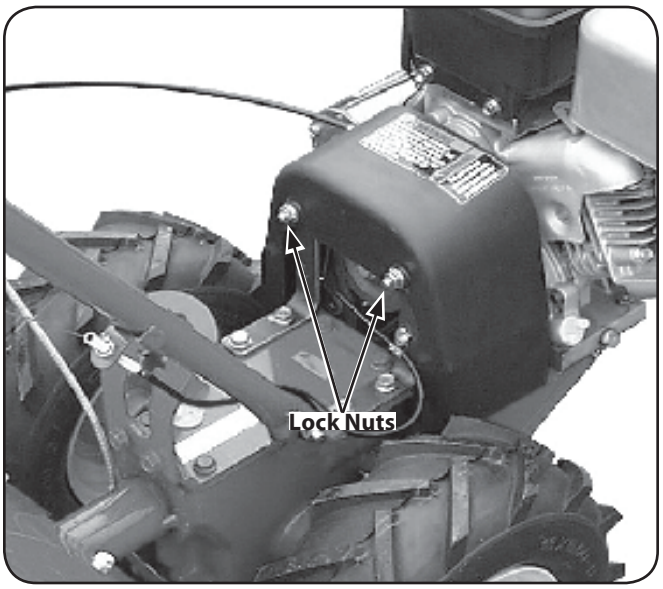


Figure 6-8

3. Reverse belt tension adjustments are done with the reverse clutch cable adjuster located on the left side of the machine near the engine. Use two ½" open-end wrenches to loosen the two adjuster jam nuts a few turns. See Fig. 6-9.

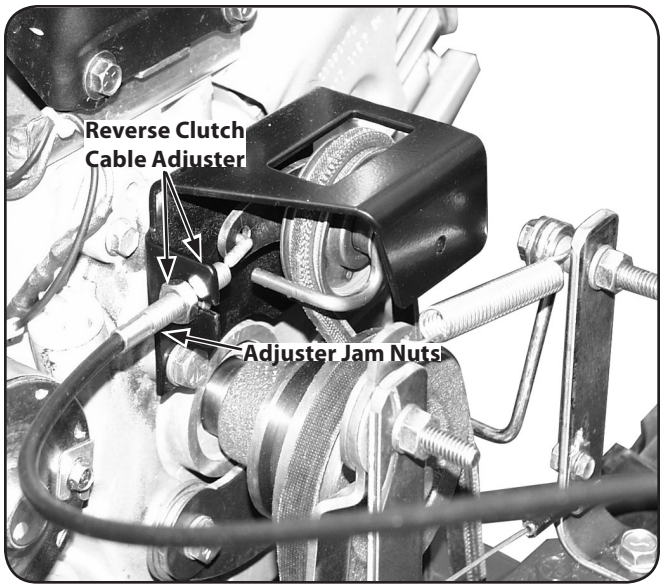


Figure 6-9

4. Move the cable adjuster away from the pulleys to increase belt tension.
5. Tighten both jam nuts securely. Reinstall the belt cover.
6. Move the tiller to an open area and test the reverse operation. Repeat this procedure if the machine does not respond when the reverse clutch is engaged.

Off-Season Storage

When the tiller won't be used for extended periods, prepare it for storage as follows:

1. Clean the tiller and engine. Do routine tiller lubrication and check for loose parts and hardware.
2. Protect the engine and perform the recommended engine maintenance by following the engine storage instructions found in the separate Engine Operator's Manual.

   NOTE: Be sure to protect the fuel lines, carburetor and fuel tank from gum deposits by removing fuel or by treating fuel with a fuel stabilizer (follow the engine manufacturer's recommendations).
4. Charge the battery fully. The battery loses some of its charge each day.

   NOTE: Never store the battery without a full charge. Recharge the battery before returning to service. When storing the tiller for extended periods, disconnect the battery cables. Removing the battery from the machine is recommended.
5. Store the tiller in a clean, dry area.
6. Never store the tiller with fuel in the fuel tank in an enclosed area where gas fumes could reach an open flame or spark, or where ignition sources are present (space heaters, hot water heaters, furnaces, etc.).

Belt Replacement

Forward Clutch Belt

1. Stop the engine, allow it to cool and disconnect the spark plug wire before working near the belts.
2. Remove the two nuts and remove the belt cover. Refer to Fig. 6-8 in the Maintenance & Adjustments Section.
3. Move the reverse clutch belt out of the way. You do not need to completely remove the belt. Press the reverse idler pulley inward for slack and then slip the bottom half of the belt completely off the transmission pulley. Pull the bottom half of the belt out of the housing and let it hang off the outside of the tiller. See Fig. 7-1.

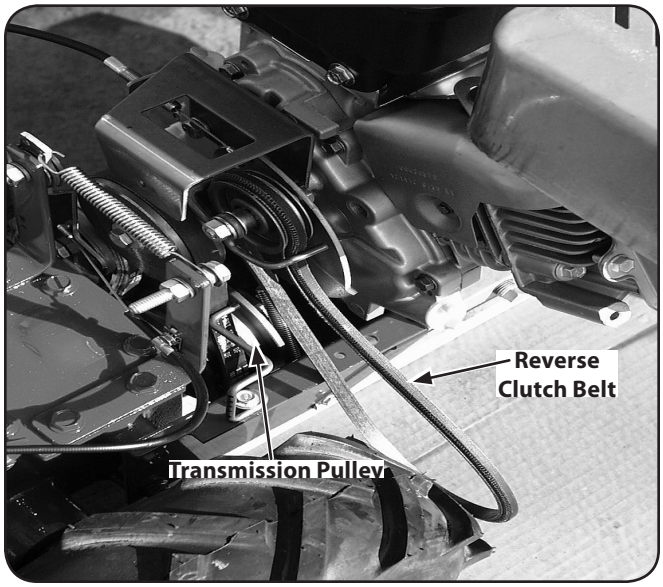


Figure 7-1

4. Disconnect the forward clutch cable from the forward clutch idler arm bracket . See Fig. 7-2. Note the hole from which you disconnect the cable. It is important that you reconnect the cable to the same hole.

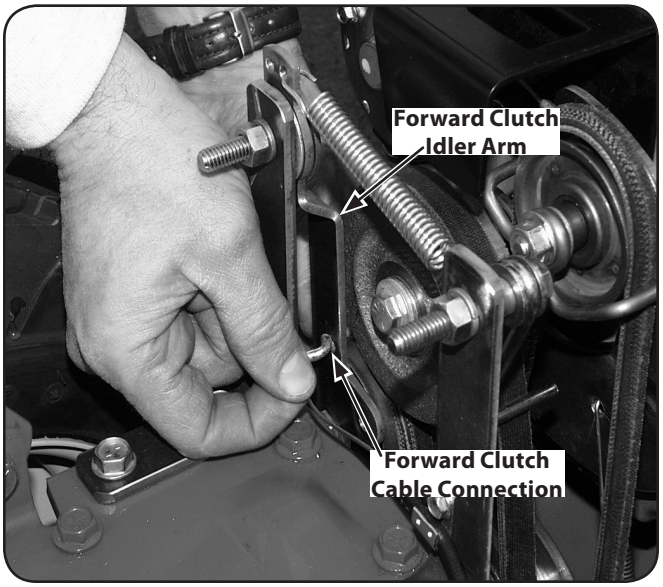


Figure 7-2

5. Slide the belt off the engine pulley, away from engine, out from under the belt guide and completely off the pulley. See. Fig. 7-3.

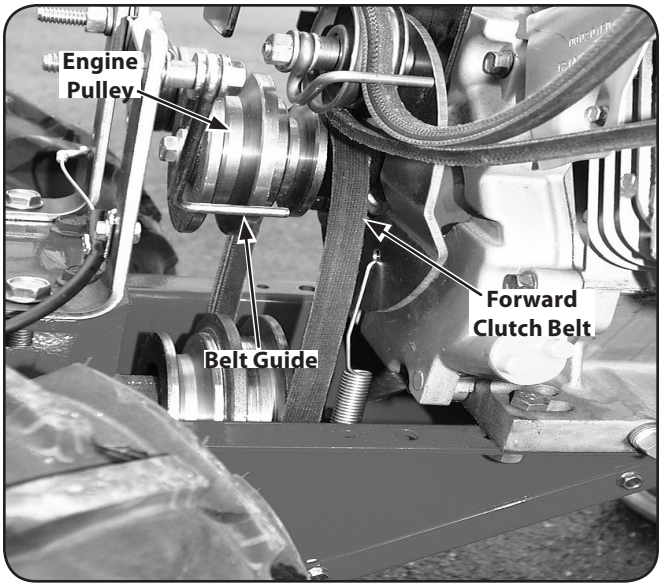


Figure 7-3

6. Slip the belt off the front of the transmission pulley. See Fig. 7-4.

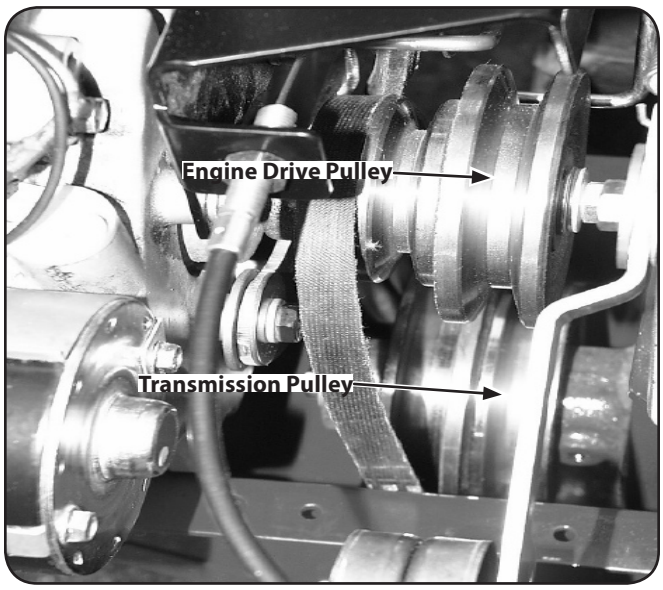


Figure 7-4

7. Work the belt out from between the pulley and the frame, around the transmission cover spring, then up and out of the machine.
8. From the front of the tiller, insert the forward clutch belt in between the bottom of the engine drive pulley and the top of transmission pulley. See Fig. 7-5.

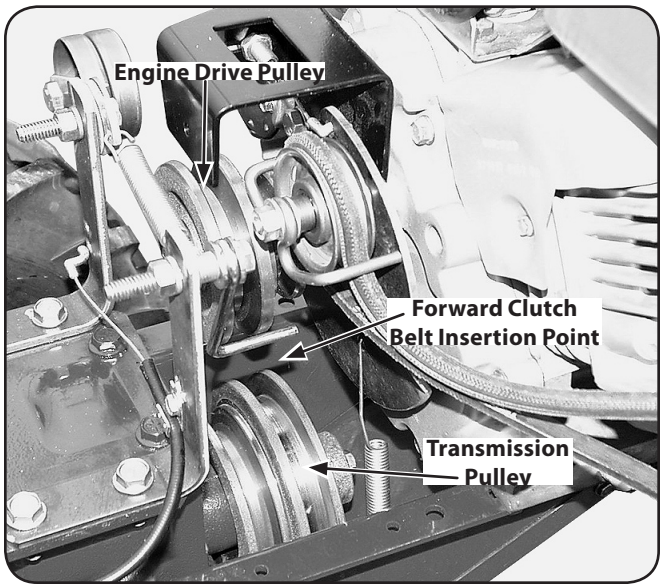


Figure 7-5

9. Insert the bottom half of the belt into the smaller, rear-most groove of the transmission pulley. See Fig. 7-4. Now slip the top half of belt under the belt guide (See Fig. 7-3) and onto the large groove of engine drive pulley. See Fig. 7-4.
10. Reconnect the forward clutch cable to the correct hole in the idler arm bracket, as shown in Fig. 7-2.

    NOTE: Belt must be installed on the inside of the belt guide.
11. Reinstall the reverse clutch belt. Insert the bottom of the belt into the frame, then pull down on the belt and roll it onto the large, forward-most groove of the transmission pulley. See Fig. 7-5.
12. Reinstall the belt cover.
13. Test for the correct tension on the forward clutch belt. See the Maintenance & Adjustments Section.

Reverse Clutch Belt

1. Stop the engine, allow it to cool and disconnect the spark plug wire before working near the belts. Also remove the ignition key on electric start models.
2. Remove the belt cover by removing the two flange locknuts. See Fig. 6-8 in the Maintenance & Adjustments Section.
3. Pull the reverse clutch belt downward and slip it off the transmission pulley. See Fig. 7-6.

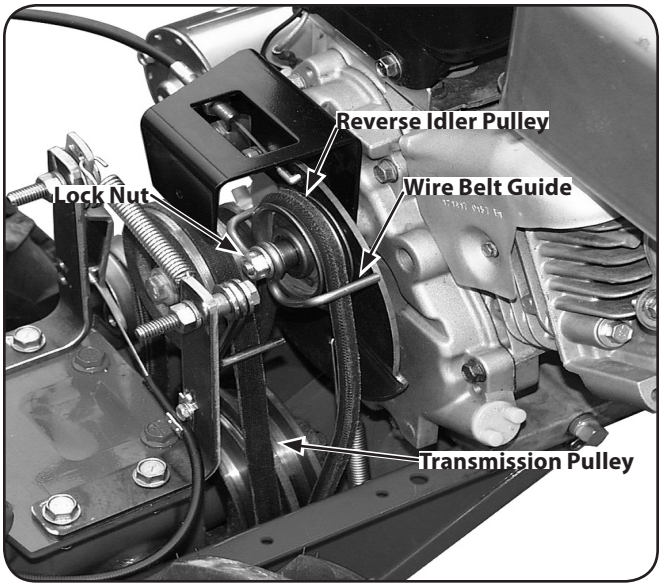


Figure 7-6

4. Use two ½" wrenches to loosen and remove the wire belt guide from the reverse idler arm pulley. Do not remove the locknut and screw.

   NOTE: The forward clutch belt must be installed before the reverse clutch belt.
5. Install the forward clutch belt (see Installing Forward Clutch Belt in this section) before installing reverse belt.

NOTE: The reverse belt has a 'V" shape. When installing the belt, make sure that the widest (flat) side of the belt rides against the reverse idler pulley and transmission pulley. If needed, the belt can be twisted "inside out" so that the "V" shaped side is on the outside and the widest side is on the inside.

6. Insert the belt down into the front of the transmission housing. Slip the top half of the belt onto the reverse idler arm pulley.
7. Pull the belt downward and loop the bottom half of the belt around the front groove of the transmission pulley.
8. Mount the belt guide between the two flat washers and tighten snugly. The guide needs adjusting before fully tightening.
9. You will need an assistant to help with this step. Pull the reverse idler pulley up to its highest point and position the belt guide horizontally level as shown in Fig. 7-7. Securely tighten the screw and lock nut.

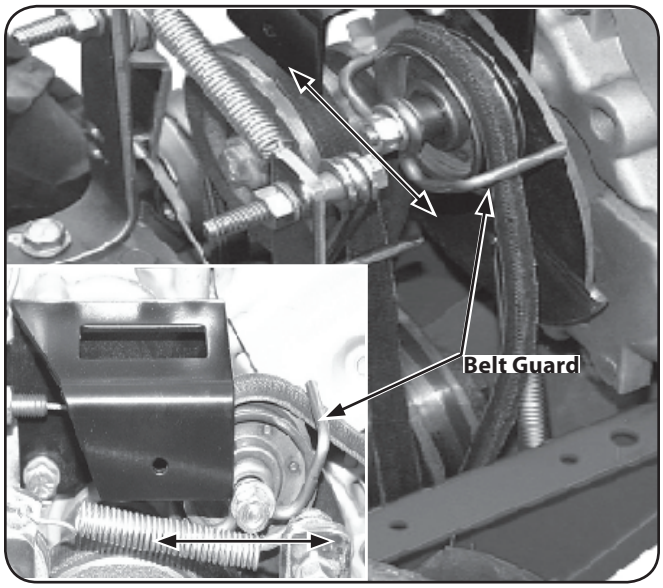


Figure 7-7

10. Pull back on the Reverse Clutch Control knob and make sure that the reverse clutch belt fully contacts the groove in the engine pulley. Release the knob and make sure that the belt doesn't engage the reverse engine pulley. This may cause the tiller to move in reverse when the Wheel Gear Lever is engaged. Adjust the cable for less tension if this condition occurs. See the Maintenance & Adjustments Section for more information.
11. Reinstall the belt cover and secure it with the two flange locknuts.
12. Test the tiller in an open location.

Tines

The tines will wear with use and should be inspected at the beginning of each tilling season and after every 30 operating hours. Tines can be replaced individually or as a complete set. Never inspect or service the tines unless the engine is stopped and the spark plug wire is disconnected.

With use, the tines will become shorter, narrower and pointed. Badly worn tines will result in a loss of tilling depth and reduced effectiveness when chopping up and turning under organic matter. Use Fig. 7-8 as a guide to when the tines should be replaced.

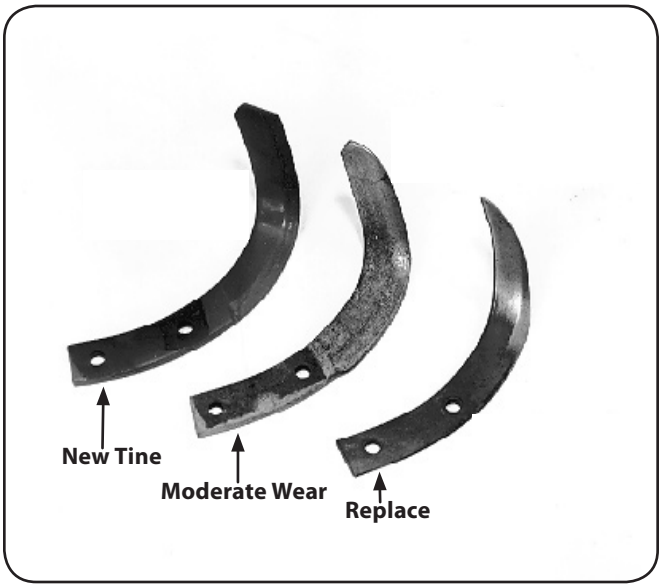


Figure 7-8

Replacing a Single Tine

1. Remove the two screws and nuts that attach a single tine to the tine holder. If needed, use penetrating oil to help free the nuts. See Fig. 7-9.

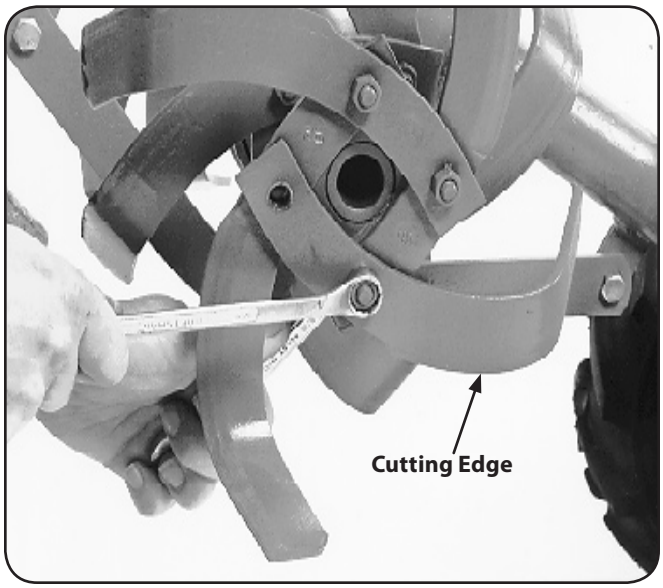


Figure 7-9

2. When installing a single tine, be sure to position it so that its cutting edge will enter the soil first as the tiller moves forward.

Removing a Tine Assembly

1. If removing both tine assemblies, mark them "left" and "right" before removal. Doing so will help ensure that the assemblies are reinstalled on the correct sides of the tiller.
2. Remove the screw and locknut that secure the tine assembly to the tine shaft. See Fig. 7-10. Pull the tine assembly off the shaft (if necessary, use a rubber mallet to tap the tine assembly outward).

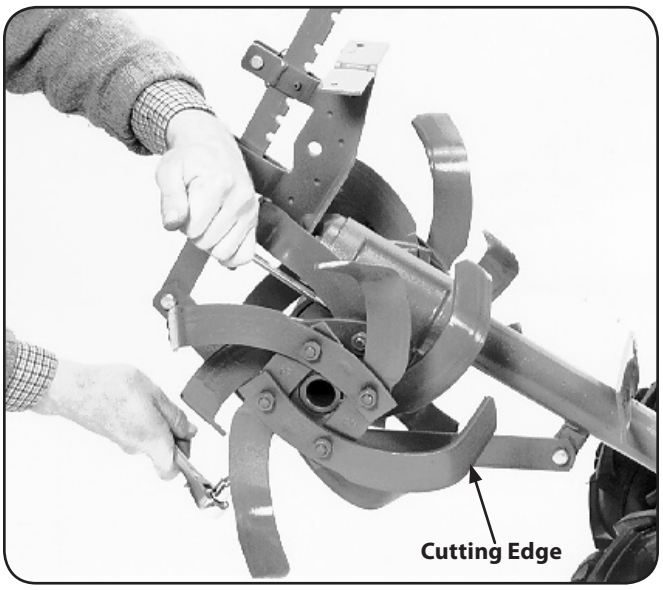


Figure 7-10

3. Before reinstalling the tine assembly, inspect the tine shaft for rust, rough spots or burrs and file or sand as needed. Apply a thin coat of grease to the shaft.
4. Install each tine assembly so that the cutting edge of the tines will enter the soil first when the tiller moves forward. Secure the tine assembly to the tine shaft using the screw and locknut previously removed. Tighten securely.

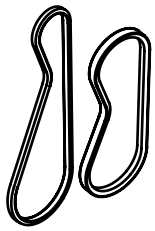
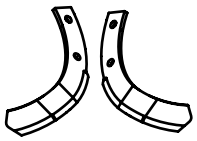
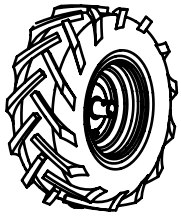
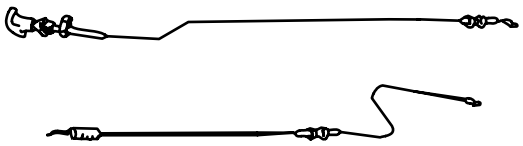
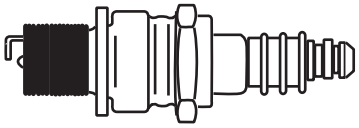
Troubleshooting

8

Problem	Cause	Remedy
Engine does not start	1. Spark plug wire disconnected. 2. Engine Throttle Control Lever incorrectly set. 3. Fuel tank empty. 4. Stale gasoline. 5. Dirty air filter(s). 6. Defective or incorrectly gapped spark plug. 7. Carburetor out of adjustment. 8. Misadjusted throttle control. 9. Dirt or water in fuel tank.	1. Reconnect wire. 2. Put lever in FAST position. 3. Add fuel. 4. Drain fuel and add fresh fuel. 5. Clean or replace filter(s). 6. Inspect spark plug. 7. See Engine Service Dealer. 8. See Engine Service Dealer. 9. See Engine Service Dealer.
Engine runs poorly or overheats	1. Defective or incorrectly gapped spark plug. 2. Dirty air filter(s). 3. Carburetor out of adjustment. 4. Stale gasoline. 5. Dirt or water in fuel tank. 6. Engine cooling system clogged. 7. Oil level is low.	1. Inspect spark plug (see Engine Manual). 2. Clean or replace (see Engine Manual). 3. See Engine Service Dealer. 4. Replace with fresh gasoline. 5. See Engine Service Dealer. 6. Clean air cooling system (see Engine Manual). 7. Check oil level (see Engine Manual).
Engine does not shut off	1. Misadjusted throttle control cable	1. See Engine Manual or Engine Service Dealer.
Wheels and Tines will not turn	1. Improper use of controls. 2. Misadjusted forward clutch control cable. 3. Misadjusted reverse clutch control cable. 4. Worn or broken clutch belt. 5. Internal transmission wear or damage. 6. Bolt and key loose in transmission pulley.	1. Review Controls & Features Section. 2. Adjust cable tension 3. Adjust cable tension 4. Check belts. Replace parts as needed. 5. Contact local dealer or the factory. 6. Tighten bolt; check that key is in place.
Tines turn, but wheels don't	1. Wheel mounting hardware missing. 2. Bolt and key loose in transmission pulley. 3. Internal transmission wear or damage. 4. Misadjusted wheel gear cable. 5. Wheel Gear Lever not fully engaged.	1. Replace hardware. 2. Tighten bolt; check that key is in place. 3. Contact local Dealer or the Factory. 4. See Maintenance & Adjustments Section 5. Engage lever.
Wheels Turn, but Tines Don't	1. Tine holder mounting hardware missing. 2. Internal transmission wear or damage.	1. Replace hardware. 2. Contact local Dealer or the Factory.
Poor tilling performance	1. Worn tines. 2. Improper Depth Regulator setting. 3. Incorrect throttle setting. 4. Belt(s) slipping.	1. See Service Section. 2. See Tilling Tips & Techniques. 3. See Controls & Features Section. 4. See Checking Clutch Belt Tension.

Replacement Parts

9

Component	Part Number and Description	
	754-04094 754-04095	Forward Drive Belt, 4L x 23.80 Reverse Drive belt, 3L x 27.440
	742-04119 742-04118	Bolo Tine (LH), 12” Bolo Tine (RH), 12”
	634-04232	Wheel, 13 x 5 x 6
	1916784 746-04027	Reverse Clutch Cable Forward Clutch Cable
	98079-56846	Spark Plug (BPR6ES)

Phone (800) 800-7310 to order replacement parts or a complete Parts Manual (have your full model number and serial number ready). Parts Manual downloads are also available free of charge at www.mtdproducts.com.

MANUFACTURER'S LIMITED WARRANTY FOR

TROY-BILT®

The limited warranty set forth below is given by Troy-Bilt LLC with respect to new merchandise purchased and used in the United States and/or its territories and possessions, and by MTD Products Limited with respect to new merchandise purchased and used in Canada and/or its territories and possessions (either entity respectively, "Troy-Bilt").

"Troy-Bilt" warrants this product (excluding its *Belts, Transmission and Attachments* as described below) against defects in material and workmanship for a period of two (2) years commencing on the date of original purchase and will, at its option, repair or replace, free of charge, any part found to be defective in materials or workmanship. This limited warranty shall only apply if this product has been operated and maintained in accordance with the Operator's Manual furnished with the product, and has not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water, or damage because of other peril or natural disaster. Damage resulting from the installation or use of any part, accessory or attachment not approved by Troy-Bilt for use with the product(s) covered by this manual will void your warranty as to any resulting damage.

Belts are warranted to be free from defects in material and workmanship for a period of thirty (30) days from the date of purchase.

Transmission — Troy-Bilt warrants the transmission (including all gears, shafts and housings) against defects in material and workmanship for the life of the tiller, to the original purchaser only, commencing on the date of original purchase or lease.

Attachments — Troy-Bilt warrants attachments for this product against defects in material and workmanship for a period of one (1) year, commencing on the date of the attachment's original purchase or lease. Attachments include, but are not limited to items such as: grass collectors and mulch kits.

HOW TO OBTAIN SERVICE: Warranty service is available, WITH PROOF OF PURCHASE, through your local authorized service dealer. To locate the dealer in your area:

In the U.S.A.

Check your Yellow Pages, or contact Troy-Bilt LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019, or call 1-866-840-6483, 1-330-558-7220 or log on to our Web site at www.troybilt.com.

In Canada

Contact MTD Products Limited, Kitchener, ON N2G 4J1, or call 1-800-668-1238 or log on to our Web site at www.mtdcanada.com.

This limited warranty does **not** provide coverage in the following cases:

a. The engine or component parts thereof. These items may carry a separate manufacturer's warranty. Refer to applicable manufacturer's warranty for terms and conditions.

b. Log splitter pumps, valves, and cylinders have a separate one-year warranty.

c. Routine maintenance items such as lubricants, filters, blade sharpening, tune-ups, brake adjustments, clutch adjustments, deck adjustments, and normal deterioration of the exterior finish due to use or exposure.

d. Service completed by someone other than an authorized service dealer.

e. Troy-Bilt does not extend any warranty for products sold or exported outside of the United States and/or Canada, and their respective possessions and territories, except those sold through Troy-Bilt's authorized channels of export distribution.

f. Replacement parts that are not genuine Troy-Bilt parts.

g. Transportation charges and service calls.

h. Troy-Bilt does not warrant this product for commercial use.

No implied warranty, including any implied warranty of merchantability of fitness for a particular purpose, applies after the applicable period of express written warranty above as to the parts as identified. No other express warranty, whether written or oral, except as mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product, shall bind Troy-Bilt. During the period of the warranty, the exclusive remedy is repair or replacement of the product as set forth above.

The provisions as set forth in this warranty provide the sole and exclusive remedy arising from the sale. Troy-Bilt shall not be liable for incidental or consequential loss or damage including, without limitation, expenses incurred for substitute or replacement lawn care services or for rental expenses to temporarily replace a warranted product.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. **Alteration of safety features of the product shall void this warranty.** You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of the misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser or to the person for whom it was purchased as a gift.

HOW STATE LAW RELATES TO THIS WARRANTY: This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

IMPORTANT: Owner must present Original Proof of Purchase to obtain warranty coverage.

Troy-Bilt LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019; Phone: 1-866-840-6483, 1-330-558-7220
MTD Canada Limited - KITCHENER, ON N2G 4J1; Phone 1-800-668-1238

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